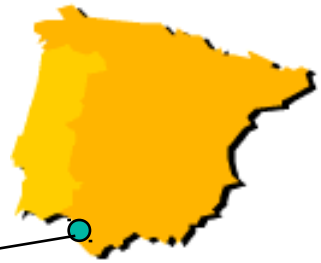
LEAK DETECTION & AUTOMATED FUEL HANDLING EQUIPMENT (AFHE) SYSTEMS

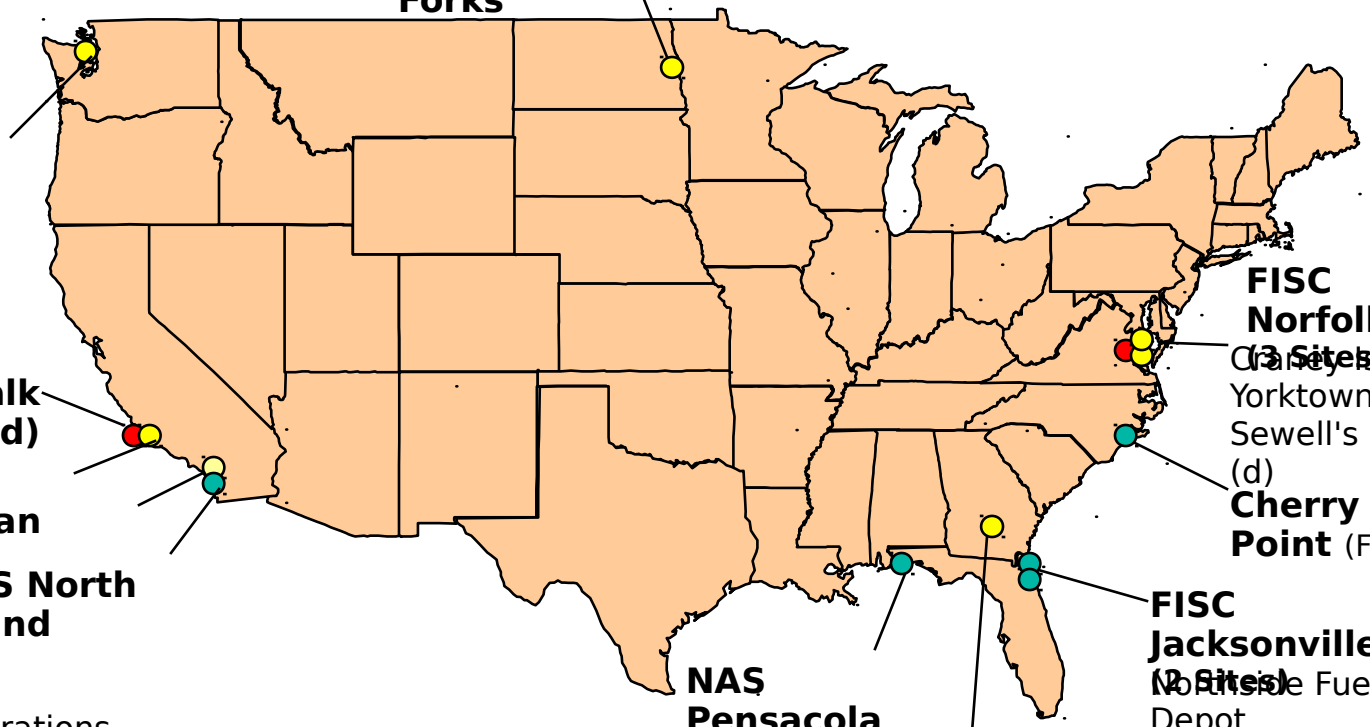
AUTOMATED FUEL HANDLING EQUIPMENT PROGRAM

OVERALL PROGRAM MISSION AND SCOPE

- **Implement and standardize Automated Fuel Handling Equipment (AFHE) at Defense Energy Support Center (DESC), Air Force, Army, Navy, & Marine Corps fuel storage and distribution activities to:**
  - **improve overall facility controls**
  - **improve inventory accountability**
  - **provide fail-safe engineering for spill prevention**
  - **increase efficiency**

AFHE Site Locations





Okinawa, Japan (FY04)

FISC Puget Sound

DESP Grand Forks

Rota Spain (FY04)

FISC Norfolk (3 Sites)

Craney Island

Yorktown

Sewell's Point

(d)

Cherry Point (FY03)

DESP Norwalk (d)

DESP San Pedro

FISC San Diego

NAS North Island

FISC Jacksonville (2 Sites)

Mayport

NAS Pensacola

Ft. Benning

Kuahua Operations

Red Hill

FISC Pearl Harbor (2 Sites)

Programmed Sites

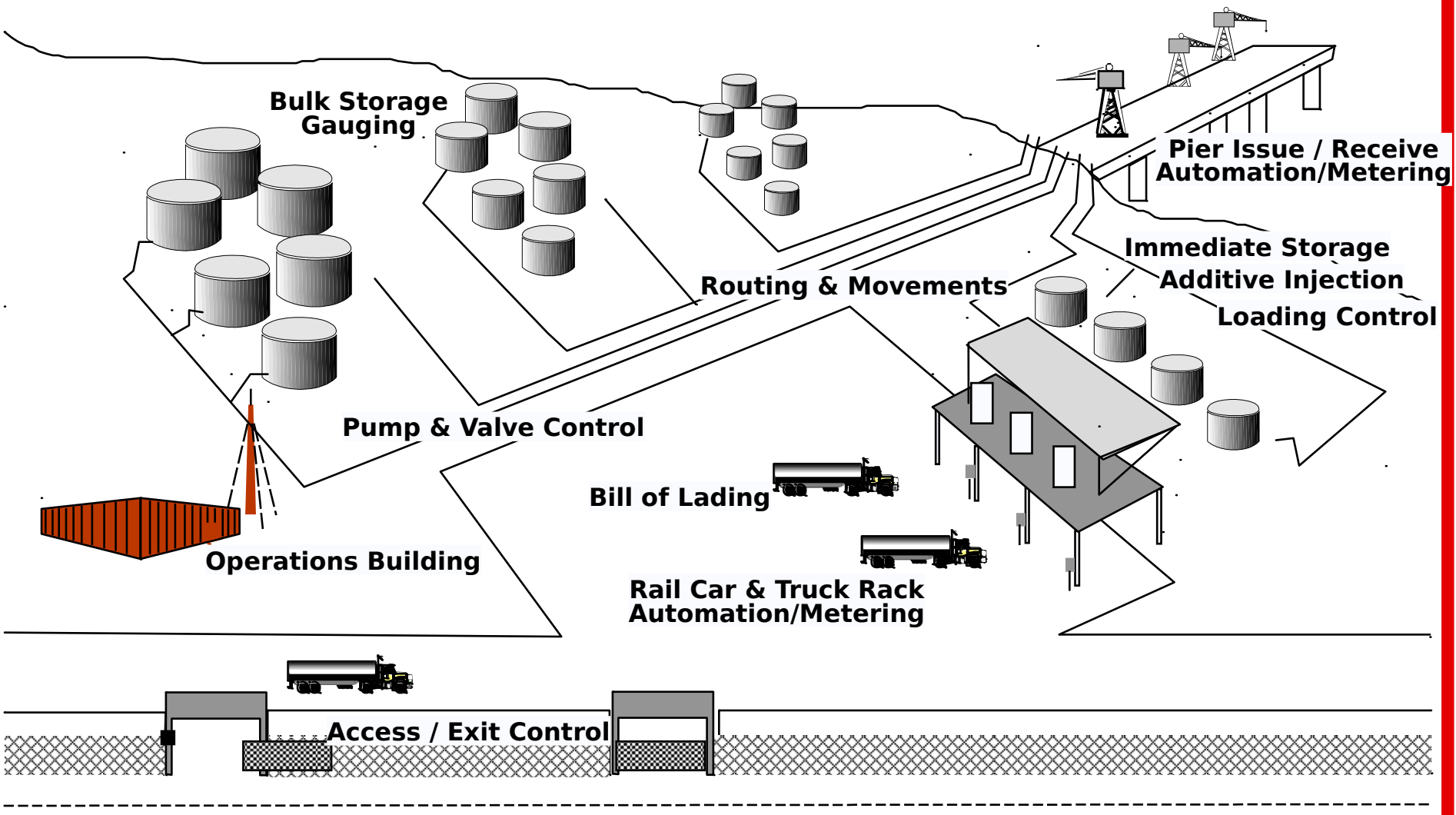
Under Design/Installation

Completed Sites

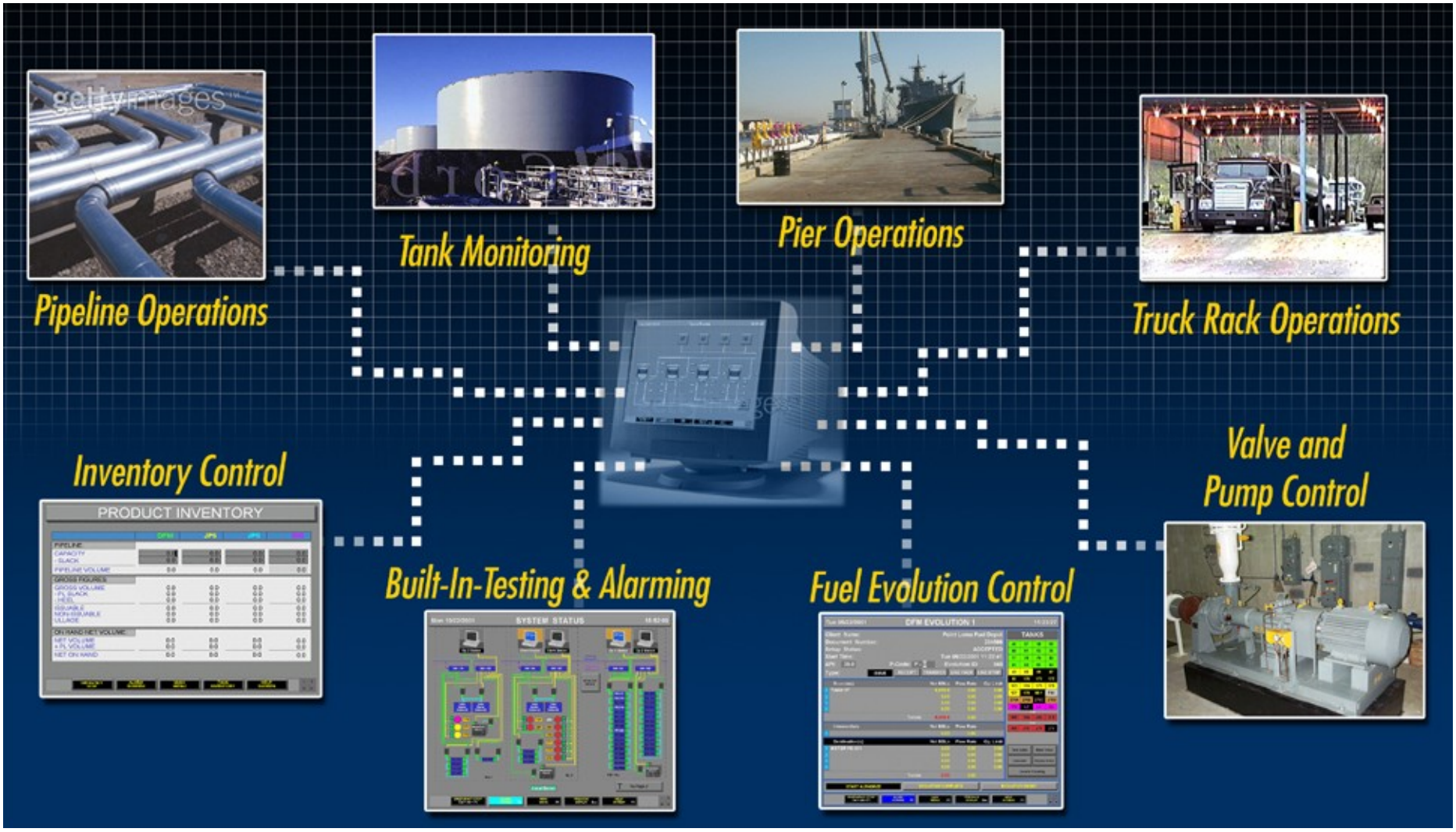
Decommissioned

TYPICAL SITE

Terminals Combine Many Types of Operations and Facilities



AFHE SYSTEM OVERVIEW



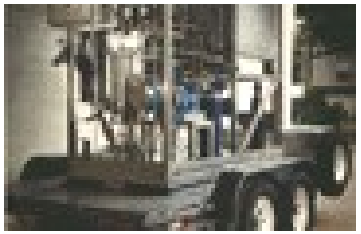
AFHE SYSTEM DESCRIPTION

- Centralized operation for fuel inventory control, movement, and management
- Supervisory Control And Data Acquisition (SCADA)
- Instrumentation, sensors, and automated controls
- Pipeline/Tank monitoring capability (Leak Detection)
- Safety controls for spill prevention
- Real time and historical database
- Report generation
- System access control
- Site surveillance (CCTV)
- Electrical power modifications
- LAN/WAN/Other Communications
- Remote Diagnostics

AFHE LEAK DETECTION INTERFACES

hansaconsult

VISTA LEAK DETECTION



CALDON

VEEDER-ROOT

RONAN

AFHE LEAK DETECTION INTERFACES

- **Mass Balance – AFHE (ATG & Flow Computers)**
- **Pressure Point/Step Analysis – Hansa & Caldon**
- **Dual Pressure Volumetric - Vista**
- **Continuous Statistical Leak Detection (CSLD) – Veeder-Root & Ronan**

TYPICAL TERMINAL OPERATOR'S CONTROL CONSOLE